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Appl. No. 09/973,285
Response Dated September 25, 2007
Reply to Office Action of June 5, 2007

•• REMARKS/ARGUMENTS ••

The Office Action of June 5, 2007 has been thoroughly reviewed. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

Claims 1-11, 14 and 15 are pending in the present application.

Claims 1-6, 8-11, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over UK Patent Application No. 2,086,243 to Fuscone et al. in view of "what is known to one of ordinary skill in the art."

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Fuscone et al. in view of U.S. Patent No. 4,768,789 to Clark.

The Examiner has relied upon Fuscone et al as disclosing:

...an electric dart game comprising a dart (Fig. 1), a dartboard provided with a frame of a plurality of scoring areas by a plurality of radial spiders and circumferential spiders which are arranged crossly (Fig. 2, 7 and 9), with a main body for receiving said dart and attached to said frame, and an electronic scoring means for displaying signals collected from the scoring areas (Fig. 5). Said scoring system uses a plurality of inductance coils (Fig. 1 and page 1, lines 125-129 connected to the electronic scoring system (Fig. 5). Fuscone discloses said dart is made of, thus provided with, a magnetic substance (page 1, lines 75-78, 103). Each of said coils is associated with a corresponding scoring area and thus defines a scoring signal zone (Fig. 2). When said dart is thrown at said dartboard, a scoring signal is generated by said dart entering said signal zone and is transmitted to said scoring system (page 2, lines 21-24, 66-82).

"Regarding the limitation that the induction coil be coreless," the Examiner states:

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...the purpose of providing the iron core in the inductor is to concentrate the effect of any magnetic field within the center of the induction coil (within the iron cores). However, as is well known by one of ordinary skill in the art, an inductor in its simplest form is a conductive wire formed in the shape of a loop or coil, and will create the magnetic field inside the coil without the presence of the core.

The Examiner concludes:

Therefore, the inclusion of iron cores in the inductors disclosed by Fuscone is *not necessary*, as the inductor would still perform the necessary function of creating a magnetic field within the center of the induction coil with or without the iron core, albeit the magnetic field would not have been as concentrated as had the iron core been in place.

The Examiner further states:

If the claims are given their broadest reasonable interpretation, the limitation of "a plurality of coreless induction coils with predetermined turns, provided with said frame and connected to said electronic scoring means", wherein "each of said coreless induction coils is associated with a corresponding one [sic] of said scoring areas and defines a scoring signal zone" is met by the invention disclosed by Fuscone, under the assertion that coreless induction coils is a matter of design choice and would have been obvious to one of ordinary skill in the art at the time of the invention.

The Examiner also states:

One would have been motivated to remove the core from the induction coil for any application that requires a small amount of induction as in said dartboard to reduce the weight of the apparatus and lower manufacturing costs.

On page 6 of the Office Action, under the *Response to Arguments* section the Examiner

states:

This argument of a magnetically insulating board necessitating the iron cores of Fuscone et al. is not persuasive, as Fuscone et al. specifically discloses that

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"ideally the full board depth should be made magnetically permeable" (P.4, lines 25-26). Thus, it is made clear by Fuscone et al. that the board does not act as an insulator which limits the capability of magnetic flux to penetrate and pass through the board, as alleged by P. 10 of applicant's Remarks.

The undersigned respectfully submits that the Examiner's position remains unsupported by the teachings of Fuscone et al.

As the Examiner notes, at page 4, lines 25-26 Fuscone et al. teaches:

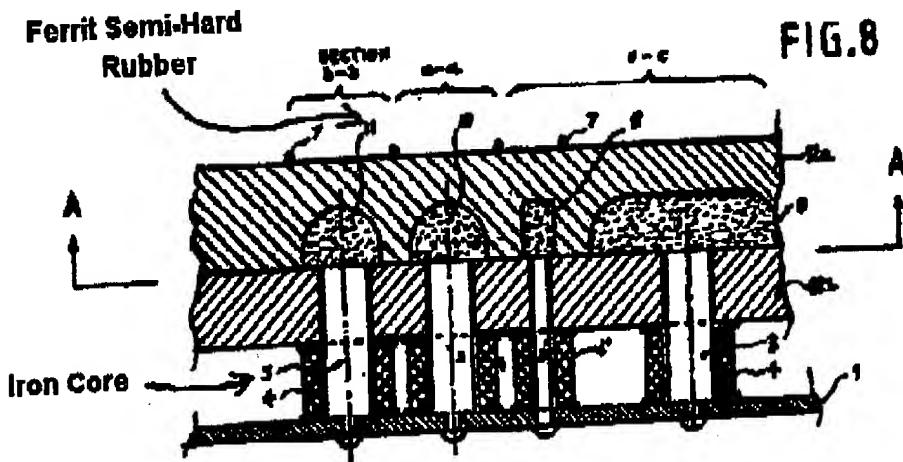
"Ideally the full board depth should be made magnetically permeable"

In the following lines, i.e., page 4, lines 26-38 Fuscone et al. teaches:

A simplified method is shown in Figures 7 and 8. The board consists of two plates, 12a and 12b, which are bonded together. The target board 12a has recesses 8, 9, 10, 1 (Figure 8 is a cross section, Figure 9 is view A-A) which exemplify the geometry to be applied to all the sections of the Board; into these recesses a ferrite semi-hard rubber or the like substance is placed. The reinforcement board 12b has holes allowing the prolonged cores 3 of the coils to protrude and to touch the magnetic rubber fillings.

Figure 8 of Fuscone et al. is provided as follows:

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It is important to recognize that, as the Examiner has noted, Fuscone et al. does teach the "board does not act as an insulator which limits the capability of magnetic flux to penetrate and pass through the board" (Examiner's comments on page 7, lines 1-3). However, Fuscone et al. teaches that in order to make the board magnetically permable (in a "simplified" manner at that) it is necessary to embed "ferrite semi-hard rubber or the like substance" in the target board 12a and to extend the (i.e., prolong) the iron cores 3 "to touch the magnetic rubber fillings." In no case does Fuscone et al. teach or suggest eliminating the iron cores of that the iron core are "not necessary" as the Examiner purports.

The actual teachings of Fuscone et al. are opposite to, and do not support, the Examiner's position, that the iron cores are "not necessary" and can be removed as a matter of "design choice."

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While the Examiner basis his position on the fact that Fuscone et al. teaches that the board can be made magnetically permeable, Fuscone et al. actually teaches extending the iron cores rather than eliminate them and further teaches (i.e. requires) incorporating recesses that are filled with magnetic rubber filling.

It is accordingly submitted that Fuscone et al. teaches against, rather than supports the Examiner's position.

Eliminating the iron cores goes directly against the teachings of Fuscone et al. and would clearly degrade the functioning of Fuscone et al.

Under the holding of the Board of Patent Appeals and Interferences in *Ex parte Hartmann*, 186 USPQ 366 (PTO Bd App 1974) such a modification would clearly be improper.

The Examiner's stated motivation - to reduce the weight of the apparatus and lower manufacturing costs - does not compensate for the degradation to the functioning of Fuscone et al., which would result in the proposed modification.

The Examiner's reliance upon Clark does not address or overcome the distinctions between the present invention and Fuscone et al.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a prima facie case of obviousness of applicant's claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

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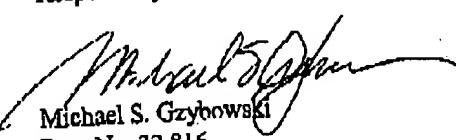
It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn. Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.

It is believed that the above represents a complete response to the outstanding Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact applicant's patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,



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